



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/590,860	04/23/2007	Jan de Bont	294-258 PC/T/US	3812
23869	7590	12/28/2010		
HOFFMANN & BARON, LLP				
6900 JERICHO TURNPIKE				
SYOSSET, NY 11791				
EXAMINER				
LILLING, HERBERT J				
ART UNIT		PAPER NUMBER		
1657				
MAIL DATE		DELIVERY MODE		
12/28/2010		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/590,860

**Applicant(s)**

DE BONT ET AL.

**Examiner**

HERBERT J. LILLING

**Art Unit**

1657

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 09 December 2010 & 11-20-2006 [IDS].
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 12-25 is/are pending in the application.
- 4a) Of the above claim(s) 14, 17-19 and 21-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 12, 13, 15, 16, 20 and 25-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 14, 17-19 and 21-24 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 August 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of Papers Received (PTO-302)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 11-20-2006

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

1. Receipt is acknowledged of an election response filed December 09, 2010 in this application filed 04/23/2007 which is a 371 of PCT/NL05/00147, International Filing Date: 03/01/2005 and claims benefit to foreign priority [EPO] 04075638.9, filed 03/01/2004.

2. Claims 12-29 are now pending in this application.

Claims 1-11 have been cancelled.

Applicant has elected claims which are commensurate in scope with the elected species as noted to be Claims 12, 13, 16, 20, and 25-29. It is noted that claim 15 has been included since it is generic to claim 12.

However, the election of species as noted for the group:

Claims 12, 13, 15[included], 16, 20 and 25-29, renders the claims vague and indefinite in scope as noted in the following paragraphs.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 12, 13, 15, 16, 20, and 25-29 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 12 recites the following:

"A method for extracting a fermentation product selected from the group consisting of 4-hydroxybenzoic acid, benzaldehyde, a catechol, benzylalcohol, cinnamic acid, phenol, and mixtures thereof, from a fermentation liquid comprising:

- (i) conducting a fermentation using a biocatalyst to form a fermentation product in a fermentation liquid;
- (ii) contacting the fermentation liquid with a solvent-impregnated porous carrier, wherein the solvent-impregnated porous carrier has a density different from the fermentation

liquid and the fermentation product is sorbed by the solvent-impregnated carrier; and  
(iii) separating the fermentation product from the solvent-impregnated porous carrier,  
wherein the fermentation product is selected from the group consisting of  
4-hydroxybenzoic acid,  
benzaldehyde,  
a catechol,  
benzylalcohol,  
cinnamic acid,  
phenol,  
and mixtures thereof.”

Applicant has elected the following species  
A: phenol (New claim 26)  
B: *Pseudomonas putida* (New claim 27)  
C: polystyrene (New claim 28)  
D: steam stripping (New claim 29) .

Applicant has indicated that claim 25 is within the scope of the claimed species  
which claim recites the following:”

“25. A method according to claim 12, wherein the catechol is 3-methylcatechol.”

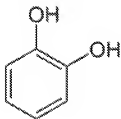
A broad range or limitation together with a narrow range or limitation that falls  
within the broad range or limitation (in the same claim) is considered indefinite, since  
the resulting claim does not clearly set forth the metes and bounds of the patent  
protection desired. See MPEP § 2173.05(c). Note the explanation given by the Board  
of Patent Appeals and Interferences in *Ex parte Wu*, 10 USPQ2d 2031, 2033 (Bd. Pat.  
App. & Inter. 1989), as to where broad language is followed by “such as” and then  
narrow language. The Board stated that this can render a claim indefinite by raising a  
question or doubt as to whether the feature introduced by such language is (a) merely  
exemplary of the remainder of the claim, and therefore not required, or (b) a required  
feature of the claims. Note also, for example, the decisions of *Ex parte Steigewald*, 131

USPQ 74 (Bd. App. 1961); *Ex parte Hall*, 83 USPQ 38 (Bd. App. 1948); and *Ex parte Hasche*, 86 USPQ 481 (Bd. App. 1949).

In the present instance, claim 12 recites the broad recitation ;

4-hydroxybenzoic acid,  
~~benzaldehyde,~~  
a catechol,  
~~benzylalcohol,~~  
~~cinnamic acid,~~  
phenol,  
and mixtures thereof.

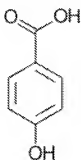
Applicant **has elected phenol** which is a compound but according to the election of species there is an issue as to the scope of the term "phenol" whether it includes all compounds containing phenol moiety which includes phenol containing benzoic acid as well as "a catechol" which



IUPAC name  
Benzene-1,2-diol  
Other names~~[hide]~~  
pyrocatechol  
1,2-benzenediol

**2-hydroxyphenol**  
1,2-dihydroxybenzene

It is noted that 4-hydroxybenzoic acid contains  
the following structure:



IUPAC name  
4-Hydroxybenzoic acid  
Other names  
p-Hydroxybenzoic acid  
para-Hydroxybenzoic acid

which structure is a substituted phenol having on the 4 position an acid.

and the claim also recites phenol which is the narrower statement of the range/limitation.

Thus, the election which includes substituted catechols which render the claims vague and indefinite as to the scope of the compounds pertaining to substituted moieties on the compounds.

What is the scope of the term "a catechol" and "phenol" within the scope of the elected species?

There is a question whether the instant claims pertaining to "phenol" includes substituted phenolic compounds?

A proper search and examination cannot be made due to the above issues.

It is noted that Claim 19 which contains "3-methylcatechol" was not indicated in the election of species whereas claim 25 was included.

4. The art of record has been recorded but a proper search and examination would require a complete knowledge of the scope of the compounds to be examined.

5. **No claim is allowed.**

6. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HERBERT J. LILLING whose telephone number is 571-272-0918. The examiner can normally be reached on WORK AT HOME MAXIFLEX.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jon Weber can be reached on 571-272-0925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

H.J.Lilling: HJL  
(571) 272-0918

Art Unit **1657**

December 17, 2010

/HERBERT J LILLING/  
Primary Examiner Art Unit 1657

Application/Control Number: 10/590,860  
Art Unit: 1657

Page 7